Temporal variability in the upper limits of fish distribution in eastern Washington streams

Authors
Michael B. Cole[1]
David M. Price
Brian R. Fransen

Streams were surveyed throughout ten forested watersheds in eastern Washington in the summer of 2001 and again in 2002 to examine inter-annual variability in the upper extent of fish distribution. In 2002, resurveys of 308 streams were performed, during which172 terminal points (occurring mid channel or at the confluence of non-fish-bearing streams) and 136 lateral points (where a non-fish-bearing channel laterally intersects a fish-bearing channel) were established. Differences between 2001 and 2002 terminal last fish points were evenly distributed among upstream shifts, no change, and downstream shifts from 2001 locations. Excluding two relatively large downstream shifts, the mean distance between 2002 and 2001 terminal last fish points was -2.5 m. Terminal last fish locations most often occurred immediately below small impasses created by large woody debris. All but two of 134 streams established as lateral points in 2001 were again found to support no fish. Our data indicate that the upper extent of fish distribution was similar between these two years, but further investigation is needed over longer time periods and a wider range of climatic and streamflow conditions to better characterize temporal variability in last fish locations.

[1] ABR, Inc.—Environmental Research & Services, PO Box 249, Forest Grove, OR 97116, (503) 359-7525, mcole@abrinc.com